		AGENCY USE ONLY	Y		
	MIT NO.:	Date Rec'd.:	Amount Rec'd.:	Check No.:	Rec'd By:
		Montana Depart ENVIRONME VATER PROTECTION	TAL QU I BUREAU		
NOI	System Ap	ent (NOI) for Mont oplication for New a Feeding	and Existing (Operations	Concentrated	Animal
form. You must prin maintain a copy of the	Animal Production t or type legibly; f ne completed appl	ed by the owner or operated by the owner or operated the forms that are not legible of ication form for your reco	attached instructi or are not complet	ons before comple	ative a 41.
Section A - Applica				RECEIVE	n
New	No prior a	application submitted for	this site.		** Your and **
Resubmitted		umber: MTG		NOV 0 4 2013	}
Renewal	Permit Nu	ımber: MTG <u>0 1 0 1</u>		DEOMPB	
Modification	Permit 1	Number: MTG	PER	MITTING & COMPLIAN	CE DIV.
		on (See instruction sheet.):		11/11/12	
Site Name Duncan	Ranch Colony			11/9/13	
Site Location Section	on 19 T8N R14I	GALAN			
Nearest City or Town	ո Harlowton, Mገ		_ County_Wheat	land	
Latitude 46 26.610	N	Longitu	de 110 01.489W		
Date Facility began of					
Is this facility or site	located on Indian	Lands? Yes V	o		-
Section C - Applicat	-	•			
Owner or Operator N		er			
Mailing Address P.			<u> </u>		27
City, State, and Zip C		MT 59036	<u> </u>		
Phone Number 406					
Is the person listed ab			ч		
Status of Applicant (Ch	eck one) Federa	State Private	Public Other	(specify)	

	on D - Existing or Po	_	s, cor currencio	ms, or whb	I OAME: [A] MOUG	
	DDEG				A	
PS	SD (Air Emissions)_					
40	4 Permit (dredge & f	ill)		_ Other	_	
	on E – Standard Inc					
Cod	le at least one SIC co	de which best re			t described in Section I	1.
1	213	. Primary	Coc		B. Second	
Cod		C. Third	Coc	252		
3	251	2d	3		D. Fourth	
				241		
Section	n F - Facility or Site	Contact Pers	on/Position:			
Name a	and Title, or Position	Title Abe W	aldner, Farm	Boss		
Mailing	g Address P.O. Box	x 248				
City, St	tate, and Zip Code H	arlowton, MT	59036			
		06-632-4147,				
Section	G - Receiving Sur					
	Outfall/Discharge L	ocations: For ea	ach outfall, List I	latitude and	longitude to the neares	st second and
		th	e name of the r	eceiving wat	cers	and and
	Outfall Number	Latitude	Longitude		Receiving Surface W	3°ove
	001	46.06453	110.01288		elshall Kliver	arei2
	002				00 1000	
	003					
	005					
	_					
lap: Att	ach a topographic map	extending one	mile beyond the	a managet a L		ivite idente
ection B	denicting the facility	an - 41 '4 1	1 .	property bo	undaries or the site acti	wity identified in
					undaries or the site acti	urface waters, stated
bove. Al	lso identify the specific	c location of the	production are	a, and land a	rns, and the receiving s pplication area(s).	urface waters, stated
the rece	lso identify the specific	c location of the	production are	a, and land a	rns, and the receiving s pplication area(s).	writy identified in ourface waters, stated
the rece	lso identify the specific	c location of the	production are	a, and land a	rns, and the receiving s pplication area(s).	urface waters, stated
bove. Al	lso identify the specific	c location of the	production are	a, and land a	rns, and the receiving s pplication area(s).	urface waters, stated
bove. Al	lso identify the specific	c location of the	production are	a, and land a	rns, and the receiving s pplication area(s).	urface waters, stated
bove. Al	lso identify the specific	c location of the	production are	a, and land a	rns, and the receiving s pplication area(s).	urface waters, stated
bove. Al	lso identify the specific	c location of the	production are	a, and land a	rns, and the receiving s pplication area(s).	urface waters, stated
bove. Al	lso identify the specific	c location of the	production are	a, and land a	rns, and the receiving s pplication area(s).	urface waters, stated
bove. Al	lso identify the specific	c location of the	production are	a, and land a	rns, and the receiving s pplication area(s).	urface waters, stated
the rece	lso identify the specific	c location of the	production are	a, and land a	rns, and the receiving s pplication area(s).	urface waters, stated

Section H – Concentration Animal Feeding Operation Characteristics Waste Production, Storage and Disposal

	Animal type	Number in Open Confinement	Number Housed Under Roof
Ø	Mature Dairy Cows		3
	Dairy Heifers		
	Veal Calves		
	Cattle (not dairy or veal)		
Ø	Swine (55 lbs or over)		2200
Ø	Swine (55 lbs or under)		1200
	Horses		
Ū	Sheep or Lambs	1600	2300
	Turkeys		
	Chickens (broilers)		
Ø	Chickens (layers)		8000
0	Ducks	,	700
Ø	Other (Specify: Chicken pullets)		1000
	Other (Specify:)		
П	Other (Specify:)		

How much manure, litter, and process wastewater is generated annually by the facility? Solid (tons): 875 Liquid/Slurry (gallons): 1.7 MG					
		rol of the permit applicant are available to apply the manure, litter, or ote: Do not include setback distances in available acreage			
8,000	Acres	_			
How much	ch manure, litter, and process wastewater i	s transferred to other persons per year? (estimated) Solid			
(tons): 0	L	iquid/Slurry (gallons): 0			
Were the o	containment structures built after Februar	y 2006?			
	Do the waste containment structures ha formations?	ve 10 feet of separation between the pond bottom and any bedrock			
		ave 4 feet of separation from the pond bottom and any ground water? actures built within 500 feet of any existing well?			

	Type of Containment/Storage	Total Capacity	Units (gallons or tons)	Days of Storage	
	☐ Anaerobic Lagoon				
	☑ Storage Pond #1	3 MG	gals	600	l .
	☐ Storage Pond #2	1 MG	gals	200	
	☐ Storage Pond #3				
	☐ Storage Pond #4				
	☐ Storage Pond #5				
	☐ Above Ground Storage Tank				
	☑ Below Ground Storage Tank #1	23,900	gal	270	
	☐ Below Ground Storage Tank #2	19,300	gal	40	
	☐ Underfloor Pits		<u> </u>		
	☐ Roofed Storage Shed				
	☐ Concrete Pad				
	☐ Impervious Soil Pad				
	☑ Other (Specify: Concrete bunker)	630	tons	260	
	Other (Specify:)		LONS	260	
Dhysica	I Data for CAFO				
the Depa develope One) Does Date Date	rentrated Animal Feeding Operations seeking ont a Nutrient Management (NMP). The NM ortment (Form NMP). Check the box below to do in accordance with ARM 17.30.1334 and as the facility have an NMP? NMP was developed: 10/31/08 NMP was last modified: 10/31/13 has not been prepared; provide detailed exp	P must be submitte that applies and pro implemented upon	d to the Department using	the form provided	d by
Section	I Supplemental Information				
					I

Section J - CERTIFICATION

Permittee Information:

This Form NMP must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]

A. Name (Type or Print) Abe Waldner	
B. Title (Type or Print)	
Farm Boss	C. Phone No. 406-632-4717
D. Signature	E. Date Signed
aly Walahren	31/10/2013

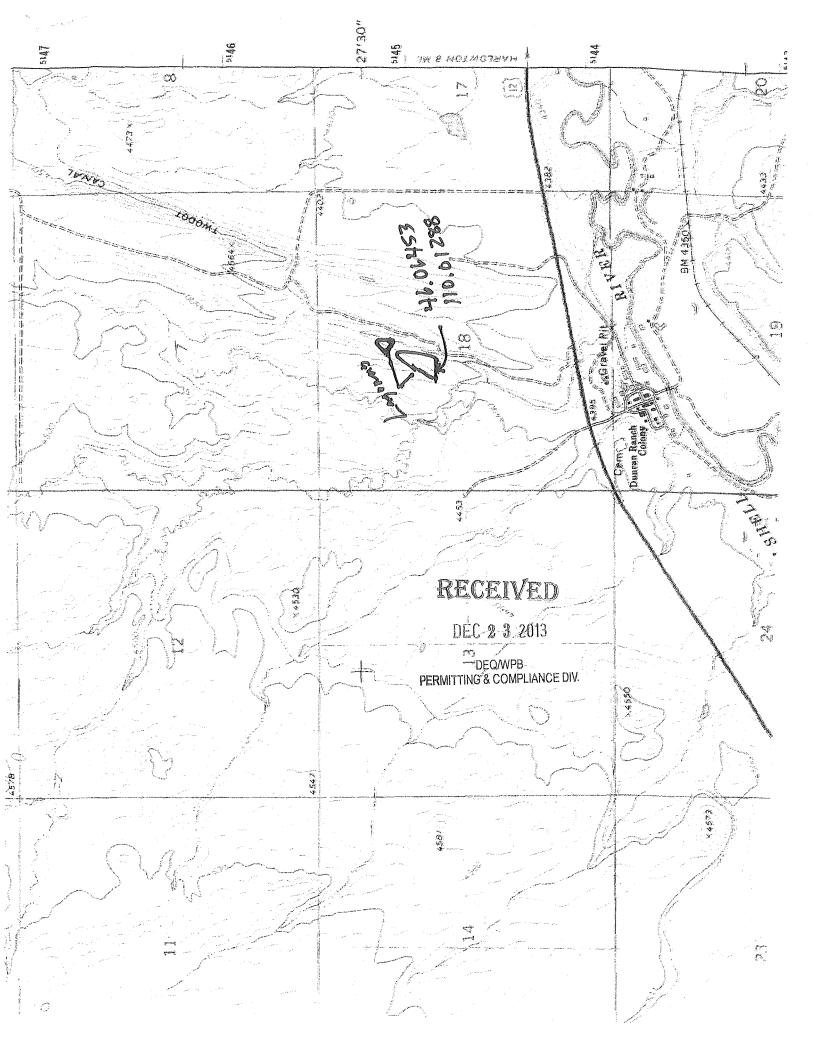
The Department will not process this form until all of the requested information is supplied, and the appropriate fees are paid. Return this form (NOI) and the applicable fee to:

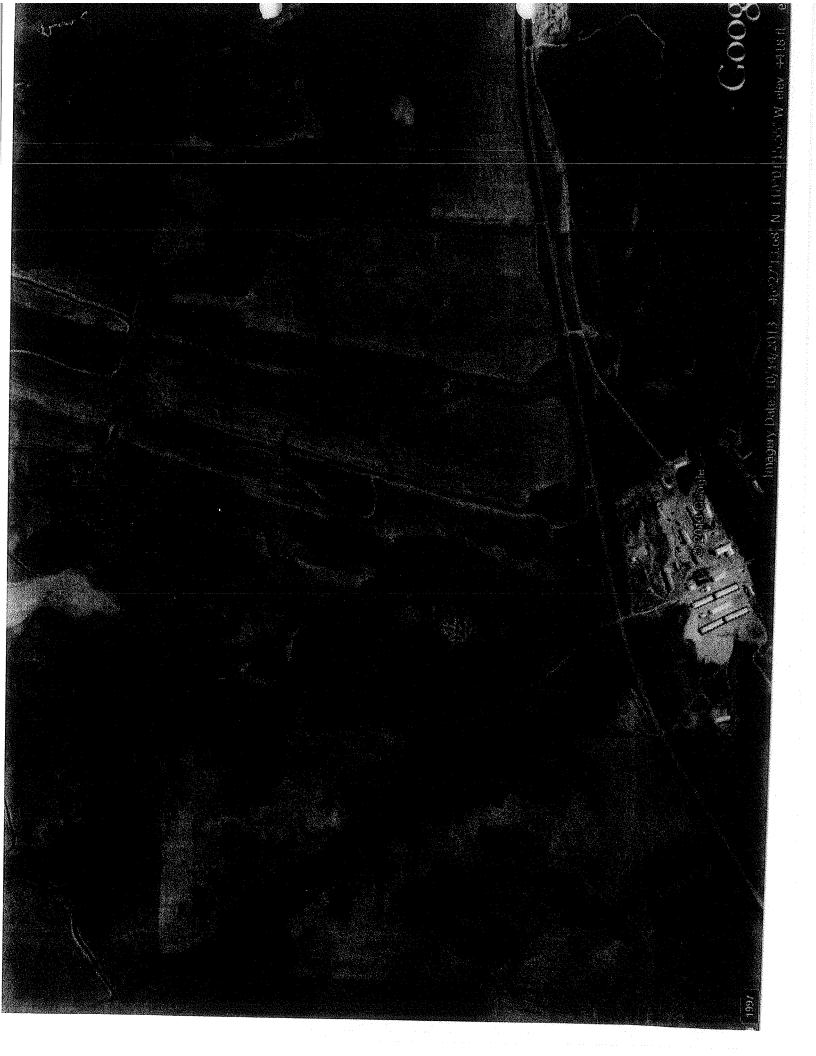
Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620-0901

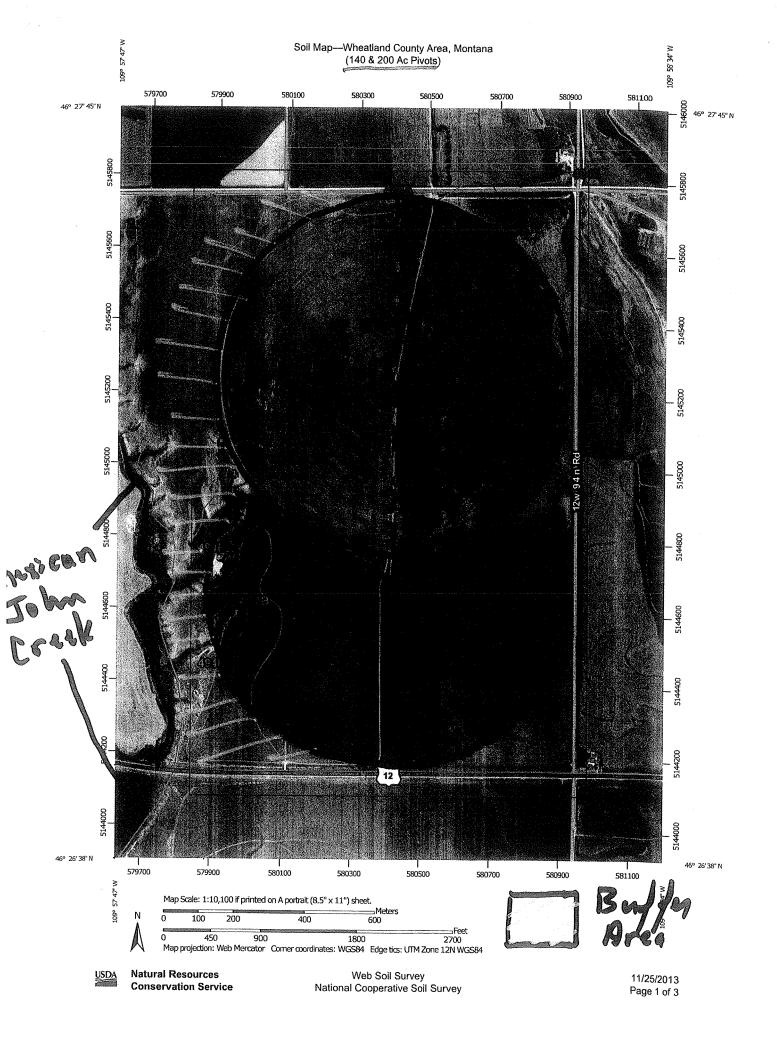
(406) 444-3080

NOV 0 4 2013

DEO/WPB
PERMITTING & COMPLIANCE DIV.







Map Unit Legend

Wheatland County Area, Montana (MT624)					
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI		
476B	Ethridge clay loam, 1 to 4 percent slopes, fan	413.0	84.4%		
484A	Rothiemay loam, 0 to 2 percent slopes	28.7	5.9%		
494E	Crago gravelly loam, 8 to 35 percent slopes, fan	16.2	3.3%		
497B	Musselshell-Crago complex, 2 to 4 percent slopes	31.3	6.4%		
Totals for Area of Interest		489.2	100.0%		

M T6010 150

AGENCY USE ONLY

Date Rec'd.:

Amount Rec'd .:

Check No .:

Rec'd By:



WATER PROTECTION BUREAU

FORM NMP

Nutrient Management Plan

READ THIS BEFORE COMPLETING FORM: Before completing this form (Form NMP), Concentrated Animal Feeding Operation (CAFO) operators need to read the General Permit, particularly Part IV.A. CAFO operators also need to read the "Instructions For filling out Form NMP," found at the back of this form. Form NMP is intended to help CAFO operators develop a site-specific Nutrient Management Plan, in compliance with Part IV.A of the General Permit and all applicable State rules and statutes. Your Nutrient Management Plan must be maintained at the site as required in Part III of the General Permit. Sections B and C on your Form NMP must state the information exactly the same way as it was stated on the most recently submitted version of your NOI-CAFO. Attach additional pages as necessary, indicating the corresponding section number on this NMP form. The 2013 General Permit, current fee schedule, and related forms are available from the Water Protection Bureau at (406) 444-3080 or https://www.deq.mt.gov/wqinfo/MPDES/CAFO.asp

Section A - NMP St	ofue.	
New	No prior NMP submitted for this site.	RECEIVED
Resubmitted	Previous NMP found incomplete.	NOV 0 4 2013
Modification	Change or update to existing NMP.	
New 2013	New 2013 version of NMP.	DEQ/WF8 PERMITTING & COMPLIANCE DIV
Section B - Facility	Information:	
Facility Name Dunca		
Facility Location Se	ection 19 T8N R14E	
Nearest City of Town	Harlowton, MT 59036	County Wheatland
Section C - Applican	nt (Owner/Operator Information):	
Owner or Operator Na	•	
Mailing Address P.O). Box 248	
City, State, and Zip co	ode Harlowton, MT 59036	
Facility Phone Number	er 406-632-4147, Ext 205	
Email None		

Section D - NMP Minimum Elements:

Animal Type and number of animals		# of Days on Site (per year)		Annual Manure Production (tons, cu. yds. or gal	
1.	3 dairy cows	365		32,400 gals	
2.	8000 laying hens	365	sed.	> 170,000 gals	
3.	1000 pullets	365			
4.	2200 pigs (> 55#)	365		1,500,000 gals	
5.	1200 piglets (< 55#)	365		325 tons	
6.	1600 ewes	35	- Contraction	> 550 tons	
7.	2300 lambs	175			
8.					

Method used for estimating annual manure production:

Weigh loads of solid manure and record number of loads hauled. Record amount of liquid hauled and/or pumped.

Manure Handling

a. Describe Manure handling at the facility:

Manure is separated into solids and liquid. Liquid is pumped to holding pond. Liquid is pumped via pipeline to pivots or spread with tanker truck. Solids and solid manure are spread onto fields.

b. Frequency	of Manure	Removal from	confinement areas:
About once ev	very 30-60	days.	

c. Is this manure temporarily stored in any location other than the confinement area? Yes No If so then how and where?

Solid manure is stored in concrete bunker. Liquid is stored in concrete pits and earthern ponds.

d. Is manure stored on impervious surface? Yes No If yes, describe type and characteristics of this surface:

Concrete bunker is has impervious floor and 8 foot walls. Concrete pits are buried in ground and are tanks.

3. Waste Control Structures						
Waste Control	Length	Width	Depth	Volume	Number of	
Structures	(ft.)	(ft.)	(ft.)	(cubic ft.	days of	
(name/type)				or gallons)	storage	
1. Concrete Bunker	250	60	8	120,000 ft3	260	
² · Evap pond				4 MG	800	
^{3.} Dairy pit	20	20	8	23,900 gal	270	
^{4.} Chicken pit	18	18	8	19,300 gal	40	
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.					ì	

hat is the 24 hr. 25 yr. storm event at this facility 2.80"
roduction area: 4acres. Type of lot (dirt or paved): Both
rea contributing drainage form outside CAFO that enters confinement areas and waste storage, inveyance, or treatment structures: acres.
hat is the annual precipitation during the critical storage period_5.67"
ow much freeboard do the pond(s) have5 feet
Disposal of Dead Animals.
scribe how dead animals are disposed of at this facility: I dead animals except chickens are buried. Chickens are incinerated.

5. Clean Water Diversion Practices

Describe how clean water is diverted from production area:

All production areas are in covered area. Rain gutters and dikes are used to keep water out of buildings.

6. Prohibiting Animals and Wastes from Contact with State Waters Describe how animals and wastes are prohibited from direct contact with state waters:

Cows, chickens, and hogs are always enclosed in buildings so they cannot get to state waters Sheep and lambs are confined in buildings for period of days listed above. Otherwise, they are out in pastures away from state waters.

Describe how Chemicals and other contaminants are handled on-site:

Vaccines and medicines are kept in locked areas. Farm chemicals are kept inside a quonset building and storage unit, so they are out of the weather.

7. Best Management Practice (BMPS)

Describe in detail all temporary, permanent and structural BMPS which will be used to control runoff of pollutants from facility's production area. Indicate the location of these measures. If BMPS are not installed include a schedule for implementation of each of these measures. Examples of BMP measures could include but are not limited to: constructing ditches, terraces,, and waterways above and open lot to divert clean water run on; installing gutters, downspouts and buried conduits to divert roof drainage; providing more roofed area: decreasing open lot surface area; repairing of adjusting water systems to minimize water wastage; using practical amounts of water for cooling purposes; recycling water if practical and applicable.

Production Area BMP's

Ditches around ponds to divert run-off water, rain gutters on buildings, dikes around buildings, new separater system, confined animals are all inside and manure is a in closed system.

Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's land production area. Indicate the location of these practices. If not already in use, include a schedule for implementation of each of these measures. Attached details and specifications may be used to supplement this description. Examples of BMP measures could include but are not limited to: maintaining setbacks from surface waters for manure applications; managing irrigation practices to prevent ponding of wastewater on land application sites;

never spray irrigating waste on to frozen ground: consulting with the Department prior to applying any						
liquid waste to frozen or snow-covered ground; applying wastes at agronomic rates.						
Land Application BMP's						
			y form of manure when soil ass before getting to draws.			
Buffers	W. W.	Consequent on Tillage	W/ W/ -			
	Yes No	Conservation Tillage	V Yes No			
Constructed Wetlands	Yes No	Grass Filter	✓ Yes No			
Infiltration Field	Yes No	Residue Management	V Yes No			
Set backs	Yes No	Terrace	Yes No			
Other examples No-till farming to reduce	erosion.					
-	,	d Record Keeping – Guidan	nce of NMP, proper operation and			
•	2 0	as described in Part 2 of the				
Has a guidance document						
	, , , , , , , , , , , , , , , , , , ,					
Certify the document add	ress the following requ	irements:				
Implementation of the NN	AP: Ves	s_No				
Facility operation and ma	intenance: Yes	s No				
Record keeping and report	rting Yes	sDNo				
Sample collection and ana	alysis: Ves	s No				
Manure transfer	V Yes	s No				
Provide name, date and location of most recent documentation: 2008 NMP, 10/31/2008 which is located at Abe Waldner's residence.						
If your answer to any of the above question is no, provide explanation:						

Section E – Land Application Will manure be land applied to land either owned, rented, or leased by the owner or operator of the facility?

Yes If yes, then the information requested in Section E must be provided.

No If no, then provide an explanation of how animal waste at this facility are managed.

Photos and/or Maps

Attach an aerial photograph or map of the site where manure is to be applied. (Use multiple photos/maps if necessary to show required details.) The photo(s)/map(s) must be printed on no larger than an 11"X 17" piece of paper, and must clearly identify the following items:

- Individual field boundaries for all planned land application areas
- A name, number, letter or other means of identifying each individual land application field
- The location of any downgradient surface waters.
- The location of any downgradient open tile line intake structures
- The location of any downgradient sinkholes
- The location of any downgradient agricultural well heads
- The location of all conduits to surface waters
- The specific manure/waste handling or nutrient management restrictions associated with each land application field
- The soil type(s) present and their locations within the individual land application field(s)
- The location of buffers and setbacks around state surface waters, well heads, etc.

Land Application Equipment Calibration

Describe the type of equipment used to land apply wastes and the calibration procedures:

Truck w/ manure box or tanker w/ spreader. Truckloads are recorded & acres applied are GPSed.

Manure Sampling and Analysis Procedures

A representative manure sample will be analyzed a minimum of once annually for Total Nitrogen, and Total Phosphorus. Analysis results will be reported in lbs/ton or lbs/1,000 gal. Results of these analyses will be used in determining rates for manure, litter, and process wastewater.

Manure Sample collection will occur according to ARM 17.30.1334

Other (describe)

Solid manure is randomly sampled with spade. Liquids are grab sampled from ponds.

Soil Sampling and Analysis Procedures

Representative soil (composite) samples from the top 6 inches layer of soil for each field where manure will be applied must be analyzed for phosphorus content at least once every three years. Analyses will be conducted by a qualified laboratory, using the Olsen P test. Results will be reported in parts per million (ppm) and will be used in determining application rates for manure, litter, and process wastewater

Soil samples collection will occur according the methods in ARM 17.30.1334

Other (describe)

(10) 0-6" and (5) 6-24" cores are randomly collected per field.

Phosphorus Risk Assessment

The permittee shall access the risk of phosphorus contamination of state waters. An assessment shall be conducted for each field, under the control of the operator, to which manure, litter or process wastewater will or

may be applied. If a new field is added in the future, then the permittee must submit a revised (modified) NMP. The permittee has the option of using Method A or Method B (below) to complete the assessment. Copies of all tables and calculations used to complete the assessments, as well as the results of the assessments, shall be submitted to the Department and copies shall be maintained on-site at the facility and available for Departmental review. The results of the assessments shall be used to determine the appropriate basis for land application of wastes from the facility.

Method Used

Indicate which method will be used to determine phosphorus application:

Method A – Representative Soil Sample

Method B – Phosphorus Index

Method A – Representative Soil Sample

- a. Obtain one or more representative soil sample(s) from the field per 17.30.1334
- b. Have the sample analyzed for Phosphorus by a qualified lab. The "Olsen P test" must be used for the analysis, and the result must be reported in parts per million (ppm)
- c. Using the results of the Olsen P test, determine application basis according to the Table below.

Soil Test

Olsen P Soil Test Results (ppm)	Application Basis
<25.0	Nitrogen Needs of Crop
25.1 - 100.0	Phosphorus Needs of Crop
100.0 - 150.0	Phosphorus Needs up to Crop Removal Rate
>150.0	No Application allowed

Method B - Phosphorus Index

- a. Complete a phosphorus Index according to the crop grown on each field. Complete table in Appendix A to calculate phosphorus index. For information on filling out specific sections in Appendix A, please refer to the method as described in Natural Resource Conservation Service (NRCS), Agronomy Technical Note MT-77 (rev3), January 2006.
- b. Using the calculated Total Phosphorus Index Value, assign the overall site/field vulnerability to phosphorus loss according to the table below.

Total Phosphorus

Total Phosphorus Index Value	Site Vulnerability to Phosphorus Loss
<11	Low
11-21	Medium
22-43	High
>43	Very High

c. Using the calculated Site Vulnerability to Phosphorus Loss, determine the appropriate application basis according to the table below.

Site Vulnerability to Phosphorus Loss	Application Basis
Low	Nitrogen Needs
Medium	Nitrogen Needs
High	Phosphorus Need Up to Crop Removal
Very High	Phosphorus Crop Removal or No Application

The applicant has 2 ways in which to report how manure or process wastewater application rates can be reported to DEQ.

- 1. **Linear Approach**. Expresses rates of application as pounds of nitrogen and phosphorus. CAFOs selecting the linear approach to address rates of application must include in the NMP submitted to the permitting authority the following information for each crop, field, and year covered by the NMP, which will be used by the permitting authority to establish site-specific permit terms:
- The maximum application rate (pounds/acre/year of nitrogen and phosphorus) from manure, litter, and process wastewater.
- The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field. [If a state does not have an N transport risk assessment, the NMP must document any basis for assuming that nitrogen will be fully used by crops.] The CAFO must specify any conservation practices used in calculating the risk rating.
- The crops to be planted or any other uses of a field such as pasture or fallow fields.
- The realistic annual yield goal for each crop or use identified for each field.
- The nitrogen and phosphorus recommendations from in ARM 17.30.1334 (technical standard) for each crop or use identified for each field.
- Credits for all residual nitrogen in each field that will be plant-available.
- Consideration of multi-year phosphorus application. For any field where nutrients are applied at a rate based on the crop phosphorus requirement, the NMP must account for single-year nutrient applications that supply more than the crop's annual phosphorus requirement.
- All other additions of plant available nitrogen and phosphorus (i.e., from sources other than manure, litter, or process wastewater or credits for residual nitrogen).
- The form and source of manure, litter, and process wastewater to be land-applied.
- The timing and method of land application. The NMP also must include storage capacities needed to ensure adequate storage that accommodates the timing indicated.
- The methodology that will be used to account for the amount of nitrogen and phosphorus in the manure, litter, and wastewater to be applied.
- Any other factors necessary to determine the maximum application rate identified in accordance with this Linear Approach.
- 2. Narrative Rate Approach. Expresses a narrative rate of application that results in the amount, in tons or gallons, of manure, litter, and process wastewater to be land applied. CAFOs selecting the narrative rate approach to address rates of application must include in the NMP submitted to the permitting authority the following information for each crop, field, and year covered by the NMP, which will be used by the permitting authority to establish site-specific permit terms:
- The maximum amounts of nitrogen and phosphorus that will be derived from all sources of nutrients (pounds/acre for each crop and field).
- The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field. The CAFO must specify any conservation practices used in calculating the risk rating.
- The crops to be planted in each field or any other uses of a field such as pasture or fallow fields, including alternative crops if applicable. Any alternative crops included in the NMP must be listed by field, in addition to the crops identified in the planned crop rotation for that field.
- The realistic annual yield goal for each crop or use identified for each field for each year, including any alternative crops identified.
- The nitrogen and phosphorus recommendations from [the permitting authority to specify acceptable sources] for each crop or use identified for each field, including any alternative crops identified.
- The methodology (including formulas, sources of data, protocols for making determination, etc.) and actual data that will be used to account for: (1) the results of soil tests required by Parts II.A.4.b and III.A.3.g of this

permit, (2) credits for all nitrogen in the field that will be plant- available, (3) the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied, (4) consideration of multi-year phosphorus application (for any field where nutrients are applied at a rate based on the crop phosphorus requirement, the methodology must account for single-year nutrient applications that supply more than the crop's annual phosphorus requirement), (5) all other additions of plant available nitrogen and phosphorus to the field (i.e., from sources other than manure, litter, or process wastewater or credits for residual nitrogen), (6) timing and method of land application, and (7) volatilization of nitrogen and mineralization of organic nitrogen.

· Any other factors necessary to determine the amounts of nitrogen and phosphorus to be applied in accordance with the Narrative Rate Approach.

• NMPs using the Narrative Rate Approach must also include the following projections, which will not be used by the permitting authority in establishing site-specific permit terms:

i. Planned crop rotations for each field for the period of permit coverage.

- ii. Projected amount of manure, litter, or process wastewater to be applied.
- iii. Projected credits for all nitrogen in the field that will be plant-available.

iv. Consideration of multi-year phosphorus application.

- v. Accounting for other additions of plant-available nitrogen and phosphorus to the field.
- vi. The predicted form, source, and method of application of manure, litter, and process wastewater for each crop
 - If the receiving water is on the 303(d) list for nutrients then the narrative rate approach must be used.
 - a. For the Linear Approach the permittee will complete the Nutrient Budget Worksheet, below, for the next 5 years to which manure or process waste water is or may be applied. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

Nutrient Budget Worksheet
Field identification: 200 Ac Pivot

F	ield i	dentification: 200 Ac Pivot – E	1/2 Year:	2015 Cror	: Winter Wheat
E	xpect	ted Crop Yield: 100 bu			o. willter wheat
P	hospl	norus index results or Phosphor	us application from	soil test: 9.0	
1	1000	u of Application: Injected throi	ugh pivot		
N	vnen	will application occur: June			
	utrier	nt Budget	Nitrogen-based Application	Phosphorus- based Application	Source of information
1		Crop Nutrient Needs, lbs/acre	169		MSU Fertilizer Guid
2	(-)	Credits from previous legume crops, lbs/ac	0		Tomovai rates
3	(-)	Residuals from past manure production lbs/acre	0		
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	120		Commercial fertilizer
5	(-)	Nutrients supplied in irrigation water, lbs/acre	0		
6		= Additional Nutrients Needed, lbs/acre	49		
7		Total Nitrogen and Phosphorus in manure, Ibs/ton or Ibs/1000 gal (from manure test)	11.11#/1000 gals		Olsen's Ag Lab No.: 19428 Hog Separated Lagoon
3	(x)	application use 1.0	0.65 x 0.75= 0.49		DEQ Circular 9, pages 27 & 28
)		= Available Nutrients in Manure, lbs/ton or lbs/1000 gal	5.4#/1000 gals		
		A 11'4' 127			
0		Additional Nutrients needed, lbs/acre (calculated above)	49		
1	(/)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)	5.4#/1000 gals		
2		= Manure Application Rate, tons/acre or 1000	9000 gals		
<u>s</u> :		gal/acre			

Comments:
Figuring 3 tons per acre straw produced. Nitrogen applied is based on annual soil tests.

Nutrient Budget Worksheet
Field identification: 200 Ac Pivot -

		lentification: 200 Ac Pivot – W	1/2. Year	: 2015 Crop	: Winter Wheat
E	xpect	ed Crop Yield: 100 bu			w winter wheat
Pl	osph	orus index results or Phosphoru	s application from	soil test: 8.5	
IVI	etnod	of Application: Injected throu	gh pivot		
W	hen v	vill application occur: June			
N	utrien	t Budget	Nitrogen-based Application	Phosphorus- based Application	Source of information
1		Crop Nutrient Needs, lbs/acre	169		MSU Fertilizer Guide removal rates
2	(-)	Credits from previous legume crops, lbs/ac	0		
3	(-)	Residuals from past manure production lbs/acre	0		
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	120		Commercial fertilizer
5	(-)	Nutrients supplied in irrigation water, lbs/acre	0		
6		= Additional Nutrients Needed, lbs/acre	49		
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1000 gal (from manure test)	11.11#/1000 gals		Olsen's Ag Lab No.: 19428 Hog Separated Lagoon
8	(x)	Nutrient Availability factor, for Phosphorus based application use 1.0	0.65 x 0.75= 0.49		DEQ Circular 9, pages 27 & 28
9		= Available Nutrients in Manure, lbs/ton or lbs/1000 gal	5.4#/1000 gals		
		A 11'' 127			
10		Additional Nutrients needed, lbs/acre (calculated above)	49		
11	(/)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)	5.4#/1000 gals		
12		= Manure Application Rate, tons/acre or 1000 gal/acre	9000 gals		
nts:					

Comments:

Figuring 3 tons per acre straw produced. Nitrogen applied is based on annual soil tests.

Nutrient Budget Worksheet

F	ield i	dentification: 140 Ac Pivot	Year: 2014	Crop: Wint	er Wheat
PI	hoenh	ed Crop Yield: 100 bu			
M	lethod	norus index results or Phosphorus of Application: Injected throu	us application from	soil test: 8.5	
W	hen y	will application occur: June	igh pivot		
N	utrier	at Budget			
			Nitrogen-based Application	Phosphorus- based Application	Source of information
1	-	Crop Nutrient Needs, lbs/acre	169		MSU Fertilizer Guid removal rates
2	(-)	legume crops, lbs/ac	0		Tutos
3	(-)	Residuals from past manure production lbs/acre	0		
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	120		Commercial fertilizer
5	(-)	Nutrients supplied in irrigation water, lbs/acre	0		
6		= Additional Nutrients Needed, lbs/acre	49		
		T			
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1000 gal (from manure test)	11.11#/1000 gals		Olsen's Ag Lab No.: 19428 Hog Separated Lagoon
8	(x)	Nutrient Availability factor, for Phosphorus based application use 1.0	0.65 x 0.75= 0.49		DEQ Circular 9, pages 27 & 28
9		= Available Nutrients in Manure, lbs/ton or lbs/1000 gal	5.4#/1000 gals		
+		Additional New :			
.0		Additional Nutrients needed, lbs/acre (calculated above)	49		
1	(/)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)	5.4#/1000 gals		
2		= Manure Application Rate, tons/acre or 1000 gal/acre	9000 gals		

Comments:
Figuring 3 tons per acre straw produced. Nitrogen applied is based on annual soil tests.

Nutrient Budget Worksheet
Field identification: South Sam

		lentification: South Sam	Year: 2015	Crop: Winter	Wheat
E	xpecte	ed Crop Yield: 35 bu			Wilcat
Pr	nosph	orus index results or Phosphoru	is application from	soil test: 11.5	
IVI	etnoc	of Application: Broadcast and	l incorporated with	hoe drills.	
W NI	nen v	vill application occur: Early fa			
INU	uirien	t Budget	Nitrogen-based	Phosphorus-	Source of
			Application	based Application	information
1		Crop Nutrient Needs, lbs/acre	65		MSU Fertilizer Guide removal rates
2	(-)	Credits from previous legume crops, lbs/ac	0		
3	(-)	Residuals from past manure production lbs/acre	0		
4	(-)	Nutrients supplied by commercial fertilizer and	0		
		Biosolids, lbs/acre			
5	(-)	Nutrients supplied in irrigation water, lbs/acre	0		·
6		= Additional Nutrients	65		
		Needed, Ibs/acre			
		Total Nitrogen and	54#/1000 gals		Olsen's Ag Lab No.:
7		Phosphorus in manure, lbs/ton or lbs/1000 gal			19426 & 19427 Hog Solid Lagoon &
		(from manure test)			Chicken Liquid
		Nutrient Availability factor,	$0.65 \times 0.50 =$		DEQ Circular 9,
8	(x)	for Phosphorus based	0.325		pages 27 & 28
		application use 1.0			
9		= Available Nutrients in	17.5#/1000 gals		
		Manure, lbs/ton or lbs/1000 gal			
		IDS/1000 gal			
		Additional Nutrients	65	<u>. (1) </u>	
10		needed, lbs/acre (calculated	05		
		above)			
11		Available Nutrients in	17.5#/1000 gals		
11	(/)	Manure, lbs/ton or lbs/1000			
		gal (calculated above)			
12		= Manure Application	3700 gals		
		Rate, tons/acre or 1000 gal/acre			
nts:		Barr aget A			

Nutrient Budget Worksheet
Field identification: North State

F	ield id	dentification: North State	Year: 2015	Crop: Barley	
E	xpect	ed Crop Yield: 50 bu			
PI	nosph	orus index results or Phosphor	us application from	soil test: 12.0	
111	Cuio	1 of Application: Broadcast an	d incorporated with	hoe drills.	
VV	Hell /	will application occur: Early fa	ıll.		
Ni	utrien	at Budget	Nitrogen-based Application	Phosphorus- based Application	Source of information
1		Crop Nutrient Needs, lbs/acre	65		MSU Fertilizer Guid removal rates
2	(-)	Credits from previous legume crops, lbs/ac	0		romovar rates
3	(-)	Residuals from past manure production lbs/acre	0		
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	0		
5	(-)	Nutrients supplied in irrigation water, lbs/acre	0		
6	ANTENNA DE MANAGE	= Additional Nutrients Needed, lbs/acre	65		
7		Total Nitrogen and Phosphorus in manure, Ibs/ton or Ibs/1000 gal (from manure test)	54#/1000 gals		Olsen's Ag Lab No.: 19426 & 19427 Hog Solid Lagoon & Chicken Liquid
8	(x)	Nutrient Availability factor, for Phosphorus based application use 1.0	0.65 x 0.50= 0.325		DEQ Circular 9, pages 27 & 28
)		= Available Nutrients in Manure, lbs/ton or lbs/1000 gal	17.5#/1000 gals		
0		Additional Nutrients needed, lbs/acre (calculated	65		
1	(/)	Available Nutrients in Manure, lbs/ton or lbs/1000	17.5#/1000 gals		
2	+	gal (calculated above) = Manure Application Rate, tons/acre or 1000	3700 gals		

Nutrient Budget Worksheet

F	ield id	dentification: Haymaker	V/ 0014		
E	xpect	ed Crop Yield: 50 bu	Year: 2014	Crop: Barley	
P	hosnh	Orus index results on Dhazala	vo anali- vi C	1.4	
\overline{N}	1ethor	orus index results or Phosphor d of Application: Broadcast an	us application from	soil test: 11.5	
N	hen v	will application occur: Early fa	a incorporated with	noe drills.	
N	utrien	at Budget		D1 1	
	7		Nitrogen-based Application	Phosphorus- based Application	Source of information
1		Crop Nutrient Needs, lbs/acre	65		MSU Fertilizer Guide removal rates
2	(-)	legume crops, lbs/ac	0		
3	(-)	Residuals from past manure production lbs/acre	0		
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	0		
5	(-)	Nutrients supplied in irrigation water, lbs/acre	0		·
6		= Additional Nutrients Needed, lbs/acre	65		
		Total Nitrogen - 1	7.111.5		
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1000 gal (from manure test)	54#/1000 gals		Olsen's Ag Lab No.: 19426 & 19427 Hog Solid Lagoon & Chicken Liquid
8	(x)	Nutrient Availability factor, for Phosphorus based application use 1.0	0.65 x 0.50= 0.325		DEQ Circular 9, pages 27 & 28
9		= Available Nutrients in Manure, lbs/ton or lbs/1000 gal	17.5#/1000 gals		
		Addition 155			
10		Additional Nutrients needed, lbs/acre (calculated above)	65		
11	(/)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)	17.5#/1000 gals		
12		= Manure Application Rate, tons/acre or 1000 gal/acre	3700 gals		
nts:					

Nutrient Budget Worksheet
Field identification: Rimrock

		t buuget worksneet			
		entification: Rimrock	Year: 2014	Crop: Winter W	heat
		d Crop Yield: 35 bu			
Ph	ospho	orus index results or Phosphoru	s application from	soil test: 12.0	
Me	ethod	of Application: Broadcast and	incorporated with	hoe drills.	
WI	nen w	ill application occur: Early fal			
Nu	trient	Budget	Nitrogen-based Application	Phosphorus- based Application	Source of information
1		Crop Nutrient Needs, lbs/acre	65		MSU Fertilizer Guide removal rates
2	(-)	Credits from previous legume crops, lbs/ac	0		
3	(-)	Residuals from past manure production lbs/acre	0		
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	0		
5	(-)	Nutrients supplied in irrigation water, lbs/acre	0		
6		= Additional Nutrients Needed, lbs/acre	65		
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1000 gal (from manure test)	54#/1000 gals		Olsen's Ag Lab No.: 19426 & 19427 Hog Solid Lagoon & Chicken Liquid
8	(x)	Nutrient Availability factor, for Phosphorus based application use 1.0	0.65 x 0.50= 0.325		DEQ Circular 9, pages 27 & 28
9		= Available Nutrients in Manure, lbs/ton or lbs/1000 gal	17.5#/1000 gals		
10		Additional Nutrients needed, lbs/acre (calculated above)	65		
11	(/)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)	17.5#/1000 gals		
12		= Manure Application Rate, tons/acre or 1000 gal/acre	3700 gals		
nts:			<u> </u>		

Nutrient Budget Worksheet
Field identification: Duffelo I

F	eld i	dentification: Buffalo Jump - E	ast Year	2014 Crop	· Winter W71
E	xpect	ted Crop Yield: 35 bu		Отор	: Winter Wheat
P	ospł	norus index results or Phosphoru	is application from	soil test: 11.5	
141	Cuio	d of Application: Broadcast and	l incorporated with	hoe drills	
VV	HCH	will application occur: Early fal	11.		
INI	utrier	nt Budget	Nitrogen-based	Phosphorus-	Source of
			Application	based	information
-	T-			Application	
1		Crop Nutrient Needs, lbs/acre	65		MSU Fertilizer Guide
-					removal rates
2	(-)	Credits from previous	0		
-	+	legume crops, lbs/ac			
3	(-)	Residuals from past manure	0		
	+	production lbs/acre			
4	(-)	Nutrients supplied by	0		
'		commercial fertilizer and			
<u></u>	+	Biosolids, lbs/acre			
5	(-)	Nutrients supplied in irrigation water, lbs/acre	0		
_	-	= Additional Nutrients			
6		Needed, lbs/acre	65		
		recucu, ms/acre		E SANETE TENNETTE SANETE STENET SE SANETE SE S	W. W. C. Colonia and A. C. Carlotta
		Total Nitrogen and	20///		
progr		Phosphorus in manure,	32#/T		Olsen's Ag Lab No.:
7		lbs/ton or lbs/1000 gal			20331
		(from manure test)			Sheep & Dairy Manure
		Nutrient Availability factor,	$0.60 \times 0.50 =$		
8	(x)	for Phosphorus based	0.00 x 0.30= 0.30		DEQ Circular 9,
,		application use 1.0	0.50		pages 27 & 28
		= Available Nutrients in	9.6#/T		
9		Manure, lbs/ton or).Om 1		
	Til Siferior roomens	lbs/1000 gal			
10		Additional Nutrients	65		
10		needed, lbs/acre (calculated			
		above)			
11		Available Nutrients in	9.6#/T		
11	(/)	Manure, lbs/ton or lbs/1000			
		gal (calculated above)			
12		= Manure Application	6.8 T/Ac		
12		Rate, tons/acre or 1000			
		gal/acre			
<u>1ts:</u>					

Nutrient Budget Worksheet

		te bauget worksneet			
		entification: Buffalo Jump	Year: 201	4 Crop: W	inter Wheat
		d Crop Yield: 35 bu			
M	ospno	orus index results or Phosphoru	s application from	soil test: 11.5	
IVIC	einoa	of Application: Broadcast and	incorporated with	hoe drills.	
W J	nen w	rill application occur: Early fal	T	.	
INU	itrient	Budget	Nitrogen-based	Phosphorus-	Source of
			Application	based	information
-	T			Application	
1		Crop Nutrient Needs, lbs/acre	65		MSU Fertilizer Guide removal rates
2	(-)	Credits from previous legume crops, lbs/ac	0		
3	(-)	Residuals from past manure production lbs/acre	0		
	 	Nutrients supplied by	0		
4	(-)	commercial fertilizer and	V		
		Biosolids, lbs/acre			
5	()	Nutrients supplied in	0		
<i>J</i>	(-)	irrigation water, lbs/acre			
6		= Additional Nutrients	65		
	260000000000	Needed, lbs/acre			
~~~~					
		Total Nitrogen and	32#/T		Olsen's Ag Lab No.:
7		Phosphorus in manure,			20331
		lbs/ton or lbs/1000 gal			Sheep & Dairy Manure
		(from manure test)			
8	()	Nutrient Availability factor,	$0.60 \times 0.50 =$		DEQ Circular 9,
Ö	(x)	for Phosphorus based	0.30		pages 27 & 28
····		application use 1.0			
9		= Available Nutrients in	9.6#/T		
,		Manure, lbs/ton or			
		lbs/1000 gal			
	2.56.25.26.2	Additional Nutrients	65		
10		needed, lbs/acre (calculated	65		
_ •		above)			
		Available Nutrients in	9.6#/T		
11	(/)	Manure, lbs/ton or lbs/1000	<i>γ.</i> ∪π/ <b>1</b>		
	` /	gal (calculated above)			
			( O 701A -		
		= Manure Application	0.8   /Ar !		1
12		= Manure Application Rate, tons/acre or 1000	6.8 T/Ac		
12		= Manure Application Rate, tons/acre or 1000 gal/acre	0.8 I/AC		

H	tield i	dentification: New Break - Sou	ih Year	2014 Cro	- D. I
ŀ	Expec	ted Crop Yield: 50 bu	. vui.	Cio	p: Barley
ŀ	'hospl	norus index results or Phosphore	is application from	soil test. 11 5	,
<u></u>		a or reprisented. Droadcast and	Incorporated with	hoe drille	
	, 11011	will application occur. Early fal	1.	noc dills.	
N	lutrie	nt Budget	Nitrogen-based Application	Phosphorus- based Application	Source of information
1		Crop Nutrient Needs, lbs/acre	65		MSU Fertilizer Guid removal rates
2	(-)	Credits from previous legume crops, lbs/ac	0		removal rates
3	(-)	Residuals from past manure production lbs/acre	0		
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	0		
5	(-)	Nutrients supplied in irrigation water, lbs/acre	0		
5		= Additional Nutrients Needed, lbs/acre	65		
7		Total Nitrogen and Phosphorus in manure, Ibs/ton or Ibs/1000 gal (from manure test)	32#/T		Olsen's Ag Lab No.: 20331 Sheep & Dairy Manure
	(x)	Nutrient Availability factor, for Phosphorus based application use 1.0	0.60 x 0.50= <b>0.30</b>		DEQ Circular 9, pages 27 & 28
		= Available Nutrients in Manure, lbs/ton or lbs/1000 gal	9.6#/T		
$\dashv$		Additional Nutrients			
)		needed, lbs/acre (calculated above)	65		
	(/)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)	9.6#/T		,
		= Manure Application Rate, tons/acre or 1000 gal/acre	6.8 T/Ac		

Fi	eld	X A: Phos O Ac Pivo None	-	Market Street Street Street			Crop:		ev			Principal description of the Control		territoria de la constitución de
Cate	gory	laone	(O) LOW	(1)	Medium	(2)	High		ALC: NO. OF THE PARTY NAMED IN COLUMN TWO IS NOT	***************************************	Yea	ar: 20		
	tor							17)	Very Hig (8)		k Value 1,2,4,8)		ight tor	Weig
3011 61	osior	NA	<5 tons	/as/yr	5-10 ton/ac	/vr	10-15			- 1				Risl
					,		tons/ac	/vm	QA> 10 for	.	1	X 1	5	7 F
Furrov	v	N/A	T-:			i	10/13/ 02/	y i	erodible soils		·	1		1.5
Irrigati			Tail wat		QS> for eros		QS> for	-	QA>6 for					_
Erosio	า		recovery very ero	', QS>6 diblo	resistant soi	1	erodible	soils	very erodik	ole	n/a	X 1	.5	0.0
			soils, or			- 1			soils					
			other so	ls		.					1		-	
Sprinkl		All fields		spray	Medium spra				·					
Irrigatio		3% slope,	all on silty s	oils 3-	on clay soils	- 1	Medium		Low spray		0	X 1.		
Erosion		sandy fiel	ds   15% slop	es,	8% slopes, la	1	pray on	1	on clay soils	:	0	/\ _L	·	0.0
		or field	large spra	y on	spray on clay	- 1	oils >8% lope, lov		>8% slopes				-	
		evaluation	1 30113	8-	soils >15%	1-	pray on				.			
		indicates little or no	15% slop	e, low :	slope, mediur	n s	oil 3-8%	lay						
1		runoff larg	spray on	silt  s	pray on silt s	j j	lope, low	.						
		spray on	large spra		15% slope	s	oray on				1			
		silts 3-8%	clay soil 3				lty soils				.			
	- 1		slope	13%		>1	15% slop	es						
Kunoff C	lass	Negligible	Very Low	or A	/ledium									
Olson So	;		Low			141	igh	V	ery High	1		X 0.5	+-	
Test P	"  -		<20 ppm	2	0-40 ppm	40	0-80 ppm	-	10				0	).5
Commerc	- lai	1-					oo ppii	~	0 ppm	2		X 0.5	1	.0
P Fertilize		vone Applied	Placed with	1	corporated <	3 Inc	orporate	nd Su	rface					.0
Application		,bbuen	Planter or injection	m	onths prior to	0 >3	months		plied to	1		X 1.0	1	.0
Method			deeper that	pl	anting or		fore crop		sture or				-	
			inches	- 1	rface applied	Į.	surface		months					
					iring growing ason	1 .	olied <3		fore crop		-			- 1
					43011		nths ore crop	em	erges					
Commerci	_						erges	1	1					
P Fertilize			<30 lbs/ac	31	-90 lbs/ac	91-:		-						
Application	ا ا	pplied	P205	P2			ac P205	P20	0 lbs/ac	1	X	1.0	1.0	$\neg \vdash$
Rate						1		1.20	.		1		1	'
Organic P	No	ne	lust a second									ļ		
Source	Ap	plied	Injected	Inco	orporated <3	Inco	rporated	Surf	ace					
Application			deeper than	~   1110	nuis prior to	>3 m	onths		ied to	2	X	1.0	2.0	
Method					nting or		re crop	past	ure or		1		**	-
				duri	ace applied ng growing		ırface		onths					
				seas		mont	ed <3		re crop		-			-
Organic P	<del> </del> -						e crop.	eme	rges		- 1			-
Ource	Nor		<30 lbs/ac		0 lbs/ac	91-15		N150	lbs/ac					-
pplication	Lyht	mea	P205	P20	_ /		C P205	P205		1	X 1	0	1.0	7
ate													0	1
stance to	>1.0	000 feet	200.1.00	-										1
oncentrate	1	1	200-1,000 eet, or	100-	200 feet .	<100	feet	0 feet	or					J
Surface			unctioning						ation	1	X 1.	.0	1.0	1
ater Flow		1	rass		-				rectly		1			
			vaterways in				-	nto						1
		c	oncentrated						ntrate		1			
		s	urface water		-		1	surf	I .					
	-						1	vater reas.	TIOW			1		
			llue: 9.0 (Lo											1

Field	00 Ac Pivot – None (0)	THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN	The second secon	Crop: B:	arley	Ye	ar: 2014	The second second
Categor Factor	У	Low (1)	Medium (2	) High (4)	Very High (8)	Risk Value (0,1,2,4,8)	Weight	Weigh Risk
Soil Erosio		<5 tons/as/yr	5-10 ton/ac/y	r 10-15 tons/ac/yr	QA> 10 for erodible soils	1	X 1.5	1.5
Furrow Irrigation Erosion	N/A	Tail water recovery, QS> very erodible soils, or QS>10 other soils		1	QA>6 for very erodible soils	n/a	X 1.5	0.0
Sprinkler Irrigation Erosion	All fields 0- 3% slope, all sandy fields or field evaluation indicates little or no runoff large spray on silts 3-8%	on silty soils 3 15% slopes, large spray on silty soils 8-	8% slopes, larg spray on clay soils >15% slope, medium spray on silt so >15% slope	soils >8% slope, low spray on clar soil 3-8%	Low spray y on clay soils >8% slopes	0	X 1.5	0.0
Runoff Clas Olson Soil		Very Low or Low	Medium	High	Very High	1	X 0.5	0.5
Test P  Commercial	1 01	<20 ppm	20-40 ppm	40-80 ppm	>80 ppm	1	X 0.5	0.5
P Fertilizer Application Method	Applied	Placed with Planter or injection deeper than 2 inches	Incorporated <3 months prior to planting or surface applied during growing season		Surface applied to pasture or >3 months before crop emerges	1	X 1.0	1.0
Commercial Fertilizer Application late	l I		31-90 lbs/ac P205	91-150 Ibs/ac P205	>150 lbs/ac P205	1	X 1.0	1.0
Organic P Ource Opplication Aethod Organic P	Applied i	deeper than 2 nches	months prior to planting or surface applied during growing season	before crop or surface applied <3	Surface applied to pasture or >3 months before crop emerges	2	X 1.0	2.0
ource Oplication Ite					>150 lbs/ac >205	1	X 1.0	1.0
stance to oncentrate Surface ater Flow	fe fu g w cc	on-1,000 1 eet, or unctioning rass raterways in oncentrated urface water	.00-200 feet	a ii c d	feet or pplication re directly nto oncentrate surface vater flow reas.	1	X 1.0 1	1.0

Field: 14	THE RESIDENCE OF THE PARTY OF T			: Winter Wh	The state of the s					
Category Factor		Low (1)	Medium (2)	High (4)	Very High (8)	Risk Value (0,1,2,4,8)	Weight Factor	Weigh Risk		
Soil Erosion		<5 tons/as/yr	5-10 ton/ac/yr	10-15 tons/ac/yr	QA> 10 for erodible soils	1	X 1.5	1.5		
Furrow Irrigation Erosion	N/A	Tail water recovery, QS>6 very erodible soils, or QS>10 other soils	QS> for erosion resistant soil		QA>6 for very erodible soils	n/a	X 1.5	0.0		
Sprinkler Irrigation Erosion	All fields 0- 3% slope, all sandy fields or field evaluation indicates little or no runoff large spray on silts 3-8%	15% slopes, large spray on silty soils 8-	on clay soils 3- 8% slopes, large spray on clay soils >15% slope, medium spray on silt soi >15% slope	slope, low spray on clay soil 3-8%	>8% slopes	0	X 1.5	0.0		
Runoff Class	Negligible	Very Low or Low	Medium	High	Very High	1	X 0.5	0.5		
Olson Soil Test P	T727424	<20 ppm	20-40 ppm	40-80 ppm	>80 ppm	1	X 0.5	0.5		
Commercial P Fertilizer Application Method	Applied	Placed with Planter or injection deeper than 2 inches	Incorporated <3 months prior to planting or surface applied during growing season	Incorporated >3 months before crop or surface applied <3 months before crop emerges	Surface applied to pasture or >3 months before crop emerges	1	X 1.0	1.0		
Commercial Fertilizer Application late	None Applied	<30 lbs/ac P205	31-90 lbs/ac P205	91-150	>150 lbs/ac P205	1	X 1.0	1.0		
pplication Nethod	None Applied	deeper than 2 inches	Incorporated <3 months prior to planting or surface applied during growing season	>3 months before crop or surface applied <3	Surface applied to pasture or >3 months before crop emerges	2	X 1.0	2.0		
ource pplication ate			31-90 lbs/ac P205	91-150	>150 lbs/ac P205	1	X 1.0	1.0		
stance to Oncentrate Surface 'ater Flow		200-1,000 feet, or functioning grass waterways in concentrated surface water	100-200 feet	a i c	o feet or application are directly nto concentrate I surface vater flow areas.	1	X 1.0	1.0		

Field: So		1	Crop:	Winter Whe	at	Year	: 2015	
Category Factor		Low (1)	Medium (2)	High (4)	Very High (8)	Risk Value (0,1,2,4,8)	Weight Factor	Weigh Risk
Soil Erosion		<5 tons/as/yr		tons/ac/yr	QA> 10 for erodible soils	1	X 1.5	1.5
Furrow Irrigation Erosion	N/A	Tail water recovery, QS>( very erodible soils, or QS>10 other soils	QS> for erosion resistant soil	1 ' ' '	QA>6 for s very erodible soils	n/a	X 1.5	0.0
Sprinkler Irrigation Erosion	All fields 0- 3% slope, all sandy fields or field evaluation indicates little or no runoff large spray on silts 3-8%	on silty soils 3 15% slopes, large spray on silty soils 8-	8% slopes, large spray on clay soils >15% slope, medium spray on silt soi >15% slope	slope, low spray on clay soil 3-8%	>8% slopes	n/a	X 1.5	0.0
Runoff Class Olson Soil		Very Low or Low	Medium	High	Very High	1	X 0.5	0.5
Test P Commercial		<20 ppm	20-40 ppm	40-80 ppm	>80 ppm	1	X 0.5	0.5
P Fertilizer Application Wethod	None Applied	Placed with Planter or injection deeper than 2 inches	Incorporated <3 months prior to planting or surface applied during growing season	before crop or surface applied <3 months before crop	Surface applied to pasture or >3 months before crop emerges	1	X 1.0	1.0
Commercial Fertilizer Application late	None Applied	<30 lbs/ac P205	31-90 lbs/ac P205	91-150 lbs/ac P205	>150 lbs/ac P205	1	X 1.0	1.0
ource pplication lethod	Applied	deeper than 2 inches	months prior to planting or surface applied during growing season	before crop or surface applied <3	Surface applied to pasture or >3 months before crop emerges	2	X 1.0	2.0
ource oplication ate				91-150	>150 lbs/ac P205	4	X 1.0	4.0
stance to : oncentrate Surface ater Flow	f f E	200-1,000 : eet, or functioning grass vaterways in concentrated urface water	100-200 feet	i i	o feet or application applicat	1	X 1.0	1.0

Field: Field: Categ	d	None (0)	Low (1	) Medium	(2)	Barley High	(4)	Very High	Year	: 2015	The state of the s	
Fact	or						,	(8)	1	( Value .,2,4,8)	Weigl Facto	- 0
Soil Ero	sion N	A	<5 tons/as/	/yr 5-10 ton/ac	/yr	10-15		QA>10 for				
				· ·		tons/ac/	yr	erodible		1	X 1.5	1.5
Furrow Irrigatio	, N	'A	Tail water	QS> for eros	ion	QS> for		soils				
Erosion	"		recovery, Query erodible	S>6 resistant so	- 1		soils	QA>6 for very erodib	r	1/a	X 1.5	0.0
			soils, or QS>					soils				
Sprinkle	1	fields 0-	Medium spr	ay Medium spr						1		
Irrigation Erosion	1	slope, all	on silty soils	3- on clay soils		Medium spray on		Low spray	n	/a	X 1.5	0.0
2,03(0))	or i	idy fields ield	15% slopes,	8% slopes, la	rge s	soils >8%		on clay soils >8% slopes				0.0
		luation	large spray o silty soils 8-	, , , , , , , , , , , ,	1	lope, low	, I	e /o slopes				
	ind	cates		soils >15% slope, mediu		pray on o	lay					
		eorno	spray on silt	spray on silt	soils	oil 3-8%						
	run		soils 3-8%	>15% slone	- 1	pray on						
	3	1	large spray or	n		ilty soils						
	- 1		clay soil 3-15 slope	%		15% slop	es					
Runoff Cla	ss Neg		Very Low or	Medium	-	1_1_						
Olson Soil			Low <20 ppm	20-40 ppm		igh		ery High	1		X 0.5	0.5
Test P Commerci	al None		Placed with			0-80 ppm		30 ppm	2		X 0.5	1.0
P Fertilizer	Appl	1	Planter or	Incorporated < months prior t	- 1	corporate			1		X 1.0	
Application Method	וי	ir	njection	planting or	1	months fore crop		plied to	efs.			1.0
wiernod			eeper than 2	surface applied		surface	1,	sture or months				
		ir	nches	during growing		plied <3		fore crop				1
				season	1	onths		erges				1
						fore crop						
Commercia P Fertilizer	1	<	30 lbs/ac	31-90 lbs/ac		erges	+-				1	
r rertilizer Application	Applie	ed P2	205	P205	1	ac P205	>15 P20	60 lbs/ac	1	Х	1.0	1.0
Rate					'		1 20	,5				2.0
Organic P	None	- In										
Source	Applie		ected eper than 2	Incorporated <3	1	rporated	Sur	face	2		1.0	
Application			. !	months prior to planting or	>3 r	nonths	app	lied to	2	^	1.0	2.0
Method			I	surface applied		ore crop urface		ure or				
				during growing		lied <3		nonths re crop				
				season	mon	iths	eme					1
Organic P	None	<31	) lbs/ac	34.00"	<del></del>	re crop.	L					
ource	Applied	P20	\=	31-90 lbs/ac 205	91-1			lbs/ac	4	X :	L.0	4.6
pplication ate					ibs/a	ic P205	P205	; 	~		-	4.0
istance to oncentrate	>1,000	1	-1,000 1	.00-200 feet	<100	feet	0 f :					
Surface		feet	, or			1	0 fee appli	t or cation	1	X 1	.0	1.0
ater Flow		gras	tioning					irectly				
			s erways in			- 1	into	,				1
			entrated					ntrate				
1			ace water				surf					1
***************************************	Molecus and a second			ŀ		1	water ireas.	1				

Field: Rin			Cr	op: Winter	Wheat		Year: 20	114
Category Factor		Low (1)	Medium (2)	High (4)	Very High (8)	Risk Value (0,1,2,4,8)	Weight Factor	Weigh Risk
Soil Erosion		<5 tons/as/yr	5-10 ton/ac/yr	10-15 tons/ac/yr	QA> 10 for erodible soils	1	X 1.5	1.5
Irrigation Erosion	N/A	Tail water recovery, QS>6 very erodible soils, or QS>10 other soils		1 '	QA>6 for very erodible soils	n/a	X 1.5	0.0
Sprinkler Irrigation Erosion	All fields 0- 3% slope, all sandy fields or field evaluation indicates little or no runoff large spray on silts 3-8%	15% slopes, large spray on silty soils 8-	Medium spray on clay soils 3- 8% slopes, large spray on clay soils >15% slope, medium spray on silt soil >15% slope	slope, low spray on clay soil 3-8%	>8% slopes	n/a	X 1.5	0.0
Runoff Class Olson Soil	Negligible	Very Low or Low	Medium	High	Very High	1	X 0.5	0.5
Test P Commercial		<20 ppm	20-40 ppm	40-80 ppm	>80 ppm	2	X 0.5	1.0
P Fertilizer Application Vethod	Applied	deeper than 2 inches	Incorporated <3 months prior to planting or surface applied during growing season	before crop or surface applied <3 months before crop	Surface applied to pasture or >3 months before crop emerges	1	X 1.0	1.0
Commercial Fertilizer application ate	None Applied	l	31-90 lbs/ac P205	emerges 91-150 lbs/ac P205	>150 lbs/ac P205	1	X 1.0	1.0
ource pplication lethod		deeper than 2 inches	planting or surface applied during growing season	>3 months before crop or surface applied <3	Surface applied to pasture or >3 months before crop emerges	2	X 1.0	2.0
ource oplication ate			31-90 lbs/ac	91-150	>150 lbs/ac P205	4	X 1.0	4.0
stance to oncentrate Surface ater Flow	1 1 1 2	200-1,000 1 feet, or functioning grass waterways in concentrated surface water	.00-200 feet	i	O feet or application are directly nto concentrate if surface water flow areas.	1	X 1.0	1.0

Field	ffalo Jump -	COLUMN TO THE PERSON OF THE PE		Crop: Wir	nter Wheat		ar: 2014	
Category	None (0)	Low (1)	Medium (2)	High (4)	Very High	Risk Value	Weight	Weigh
Factor					(8)	(0,1,2,4,8)	Factor	Risk
Soil Erosion	NA	<5 tons/as/yr	5-10 ton/ac/yr	10-15 tons/ac/yr	QA> 10 for erodible soils	1	X 1.5	1.5
Furrow	N/A	Tail water	QS> for erosion	QS> for	QA>6 for		X 1.5	
Irrigation Erosion		recovery, QS>6 very erodible soils, or QS>10 other soils		erodible soil		n/a	<b>^1.3</b>	0.0
Sprinkler	All fields 0-							
Irrigation Erosion	3% slope, all sandy fields or field	Medium spray on silty soils 3- 15% slopes, large spray on	on clay soils 3- 8% slopes, large spray on clay	Medium spray on clay soils >8% slope, low	Low spray on clay soils >8% slopes	n/a	X 1.5	0.0
	evaluation indicates little or no runoff large	silty soils 8- 15% slope, low spray on silt soils 3-8%	soils >15% slope, medium spray on silt soil >15% slope	spray on clay soil 3-8% slope, low spray on				
Runoff Class	spray on silts 3-8%	large spray on clay soil 3-15% slope		silty soils >15% slopes				
Olson Soil		Very Low or Low	Medium	High	Very High	1	X 0.5	0.5
Гest Р	***************************************	<20 ppm	20-40 ppm	40-80 ppm	>80 ppm	1	X 0.5	0.5
	None	Placed with	Incorporated <3	Incorporated	Surface	1	X 1.0	1.0
Fertilizer Application	Applied	Planter or	months prior to	>3 months	applied to	-		1.0
Method		injection deeper than 2	planting or	before crop	pasture or			
		inches	surface applied during growing	or surface	>3 months			
			season	applied <3 months before crop emerges	before crop emerges			
Commercial	None	<30 lbs/ac	31-90 lbs/ac	91-150	>150 lbs/ac		X 1.0	
Fertilizer application ate	Applied	P205	P205	lbs/ac P205	P205	1	X 1.0	1.0
1	ŀ	Injected	Incorporated <3	Incorporated	Surface	3	X 1.0	
	i	deeper than 2	months prior to	>3 months	applied to	2	X 1.0	2.0
pplication lethod		1	i	before crop	pasture or			
recitod		1	1		>3 months			
		!	season	applied <3 months before crop.	before crop emerges			
ſ	- 1	1			>150 lbs/ac	4	X 1.0	4.0
pplication ate	Applied	P205	P205	lbs/ac P205	P205			4.0
	i		100-200 feet	<100 feet	0 feet or	1	X 1.0	1
oncentrate Surface	1	feet, or	-		application	4		1.0
ater Flow	1	functioning	- Communication of the Communi		are directly			
-ser Plow	1.	grass waterways in		i	into			
		concentrated		1	concentrate			
	1	surface water		1	d surface			
.				1	water flow areas.			
-						[	1	[

Field: Sur	THE RESERVE THE PROPERTY OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO I		Cro	p: Winter W	heat	Year	2014	
Category Factor	None (0)	Low (1)	Medium (2)	High (4)	Very High (8)	Risk Value (0,1,2,4,8)	Weight Factor	Weigh Risk
Soil Erosion		<5 tons/as/yr		tons/ac/yr	QA> 10 for erodible soils	1	X 1.5	1.5
Irrigation Erosion	N/A	very erodible soils, or QS>10 other soils		1	QA>6 for ls very erodible soils	n/a	X 1.5	0.0
Sprinkler Irrigation Erosion	All fields 0- 3% slope, all sandy fields or field evaluation indicates little or no runoff large spray on silts 3-8%	15% slopes, large spray on silty soils 8-	on clay soils 3-8% slopes, large spray on clay soils >15% slope, medium spray on silt soi >15% slope	soils >8% slope, low spray on clay soil 3-8%	Low spray on clay soils >8% slopes	n/a	X 1.5	0.0
Runoff Class Olson Soil	Negligible	Very Low or Low	Medium	High	Very High	1	X 0.5	0.5
Test P		<20 ppm	20-40 ppm	40-80 ppm	>80 ppm	1	X 0.5	0.5
S ==	Applied	Placed with Planter or injection deeper than 2 inches	Incorporated <3 months prior to planting or surface applied during growing season	>3 months before crop or surface applied <3 months before crop	Surface applied to pasture or >3 months before crop emerges	1	X 1.0	1.0
Commercial   Fertilizer / Application ate		<30 lbs/ac P205	31-90 lbs/ac P205	91-150 lbs/ac P205	>150 lbs/ac P205	1	X 1.0	1.0
ource , pplication lethod	Applied	deeper than 2 inches	Incorporated <3 months prior to planting or surface applied during growing season	or surface	Surface applied to pasture or >3 months before crop emerges	2	X 1.0	2.0
Purce A Pplication Ite	pplied p		!	91-150	>150 lbs/ac P205	4	X 1.0	4.0
stance to > oncentrate Surface ater Flow	fi fi g w c	200-1,000 eet, or unctioning trass vaterways in oncentrated urface water	100-200 feet	i	O feet or application are directly nto concentrate disurface water flow	1	X 1.0	1.0

Appendix A: Phosphorus Index Worksheet (Complete for each field and crop)

	rie	Id -	None (	phorus Ind - South (0) Low	William	the congress of the congress o		Crop:	Barle	·V		Year: 2014			
	Categ	ory	· '	LOW	(1)	Mediu	n (2)	Hig	h (4)	Very Hig	-	Yea	ir: 20	14	
	Fact Soil Ero	-	NIA.						,	(8)		isk Value ),1,2,4,8)	1	eight	Weig
		3.0,,	NA	<5 tons/	'as/yr	5-10 ton/	ac/yr	10-15		00. 10				COI	Risk
								tons/a		QA> 10 for erodible		1	Х	1.5	1.5
	Furrow Irrigatio	-	N/A	Tail wate	er	QS> for ero				soils				- 1	1.5
	Erosion	n		recovery	, QS>6	resistant s	oil	QS> fo		QA>6 for	1	n/a	X 1		
	,	l		very eroc	lible	ł		Crodib		very erodik	le	11) G	~ 3		0.0
				soils, or ( other soi	QS>10				- 1	30115				-	
	Sprinkler	1	ll fields 0	- Medium		24			1						
	rrigation rosion	1 -	% slope, a	ON SHIVE	oils 3-	Medium sp on clay soils		Mediun		Low spray	+-	m/=	· ·		
16	างเอก		andy field	3 113% Slope	25,	8% slopes, I	1	spray or	clay	on clay soils	:   '	n/a	X 1.	5	0.0
			field Valuation	large spra	y on	spray on cla	•	soils >8 slope, lo		8% slopes				-	
			dicates	silty soils	8-	Soils >15%	- 1	spray on							
		lit	tle or no	IDDIAV on c	ilt -	slope, medic	ım s	soil 3-89	6						
		ru	noff large	soils 3-8%	>	pray on silt 15% slope	- 1	slope, lo							
			ray on	large spray	on	vi alobe	- 4	pray on							
	_	Sift	ts 3-8%	clay soil 3-	15%			ilty soils 15% slo							
Ru	noff Cla	ss Ne	gligible	Very Low o		_			Pes					1	
				Low o	·   N	1edium	Н	igh	Ve	ery High	<del> </del>				
Tes	on Soil			<20 ppm	20	0-40 ppm	-	0.00				L	X 0.5	0	).5
L	nmercia	1 0:				- Phili	40	0-80 ppi	n >8	0 ppm	1		X 0.5	+-	
P Fe	imercia ertilizer	Nor  App		Placed with	in	corporated	<3 In	COrpora						0	).5
App	lication	1	eu	Planter or injection	1	ourns buot	to  >3	month:		face Dlied to	1		X 1.0	1	1
Met	thod		i	deeper than	pla	anting or	be	fore cro	p pas	ture or				1 4	.0
			ļ	inches	ſ	rface applied ring growing	d or	surface	>3	months					- 1
						i ilig growing Ison		plied <3	befo	ore crop					
			l				ſ	onths ore crop	eme	erges					- 1
Com	mercial	None	,	20 P. 4				erges						1	
P Fer	tilizer	Appli		<30 lbs/ac P205		90 lbs/ac	91-	150	>150	D lbs/ac					
	ication		1		P20	15	lbs/	ac P205	P20		1	X	1.0	1.0	)
Rate															-
Organ Source	1	None	111	njected	Inco	rporated -2	-						- 1		
	cation	Applie	ed d	eeper than 2	mon	rporated <3 ths prior to	Inco	rporate onths	Surfa	ce	2	X	1.0		-
Metho	od		ir	nches	plan	ting or	1	re crop		ed to	<b>6.</b> ,			2.0	
					surfa	ce applied	or su	ırface	pastu >3 me						1
					durir	ng growing		ed <3	before	e crop			1		-
Organi					Juan	J.1.	mont		emerg						-
ource	1.	lone pplied		0 lbs/ac	31-90	) lbs/ac	91-15	e crop.							
pplica		יאטוופ(	-  P2	205	P205			P205	>150   P205	bs/ac	4	X 1.	0	10	+
ate							•		203					4.0	1
istanc	e to >	1,000	feet 20	0-1,000	167										
oncent	trate			t, or	100-5	00 feet	<100 f	feet	0 feet o	or	1				
Surfac ater F				ctioning					applica	tion	1	X 1.0	)	1.0	1
ACCI P	.ow		gra	ss					are dire	ectly					
				erways in		-		- 1	into						
	-			centrated ace water					concent surfac	rate			1	:	
			3411	ace water		1			vater fl			1			
-	į		Ì	1		1		1'	varet II	ow		i			

## Section F - CERTIFICATION

Permittee Information: This form must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or

# All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-

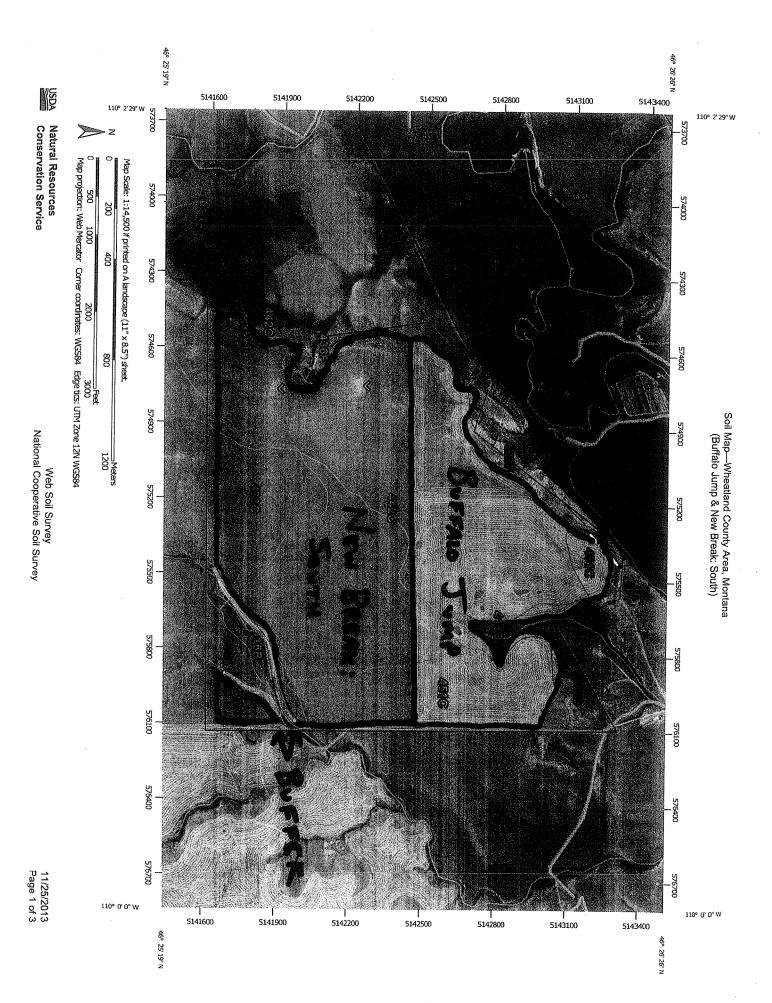
A. Name (Type or Print)	75-5-
Abe Waldner	
B. Title (Type or Print)	
Farm Boss	C. Phone No.
D. Signature	406-632-4717, x205
- als Waldner	E. Date Signed
The Department will not process this form until all of the verse delications.	31/10/2013

The Department will not process this form until all of the requested information is supplied, and the appropriate fees are paid. Return this form and the applicable fee to: KLICEN/En

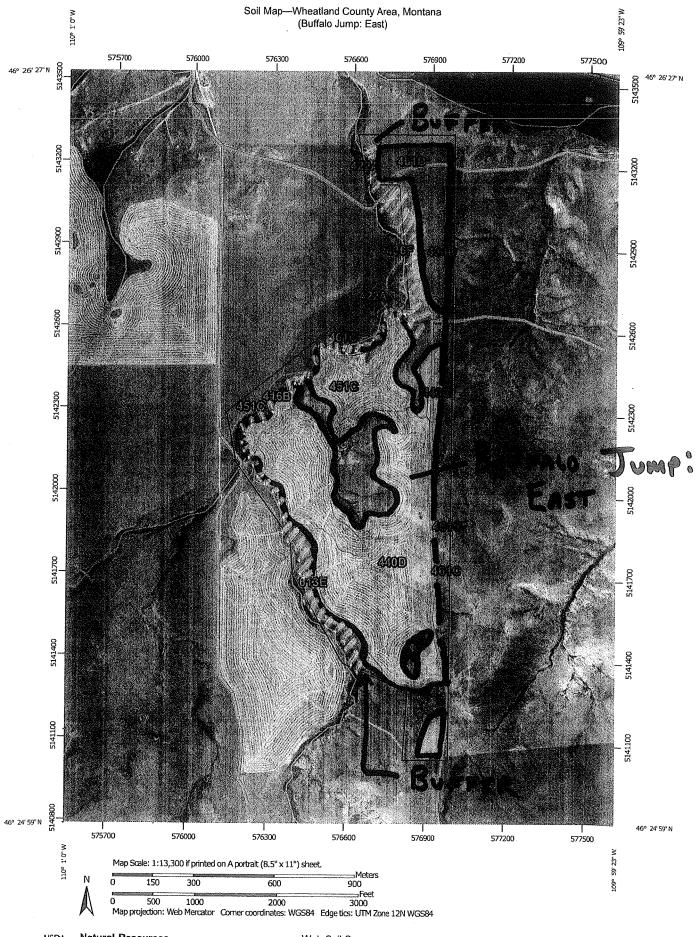
Department of Environmental Quality Water Protection Bureau PO Box 200901 Helena, MT 59620-0901 (406) 444-3080

NOV 0 4 2013

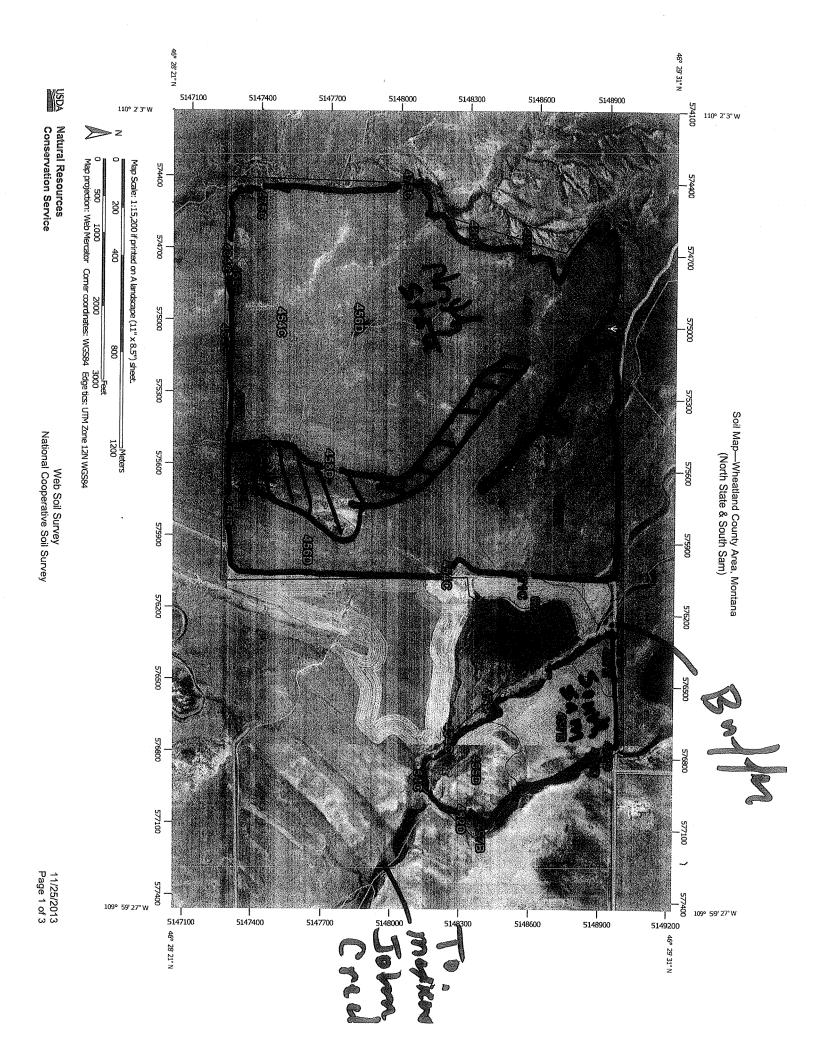
DEOAve PERMITTING & COMPLIANCE DIV.



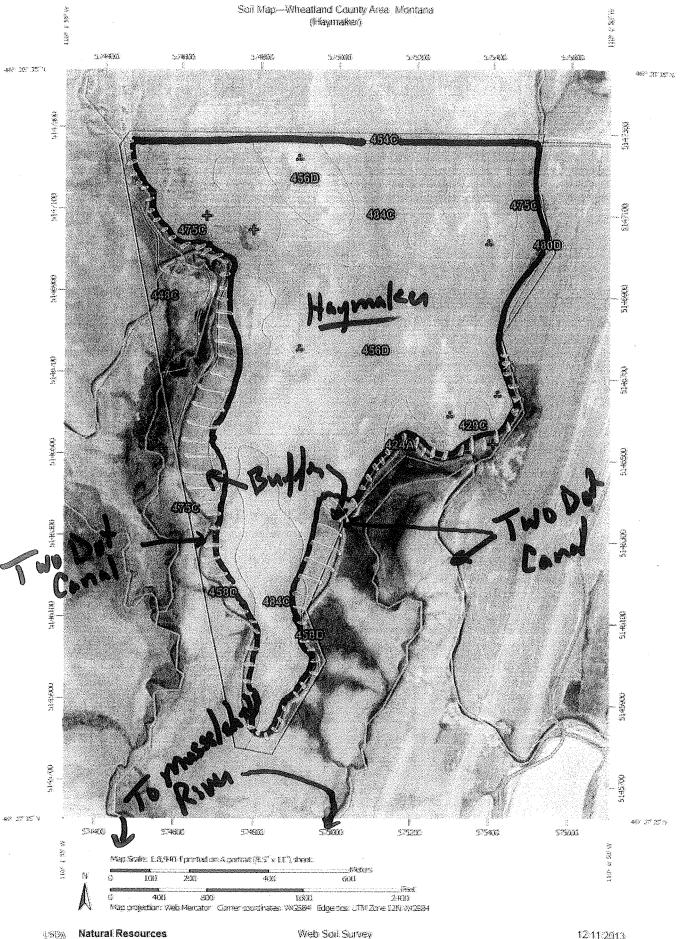
Wheatland County Area, Montana (MT624)						
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI			
416B	Fairway-Korchea loams, 0 to 4 percent slopes, rarely flooded	35.4	6.2%			
433C	Boxwell-Rentsac complex, 2 to 8 percent slopes	63.9	11.2%			
436F	Cabbart-Rentsac complex, 15 to 60 percent slopes	11.2	2.0%			
442C	Rhame-Rentsac complex, 2 to 8 percent slopes	335.5	58.9%			
442D	Rhame-Rentsac complex, 8 to 15 percent slopes	12.4	2.2%			
451C	Chinook gravelly fine sandy loam, 2 to 8 percent slopes	87.5	15.4%			
629F	Cabba-Rock outcrop complex, 15 to 60 percent slopes	9.4	1.6%			
643C	Shambo loam, 4 to 8 percent slopes	14.5	2.5%			
Totals for Area of Interest		569.8	100.0%			



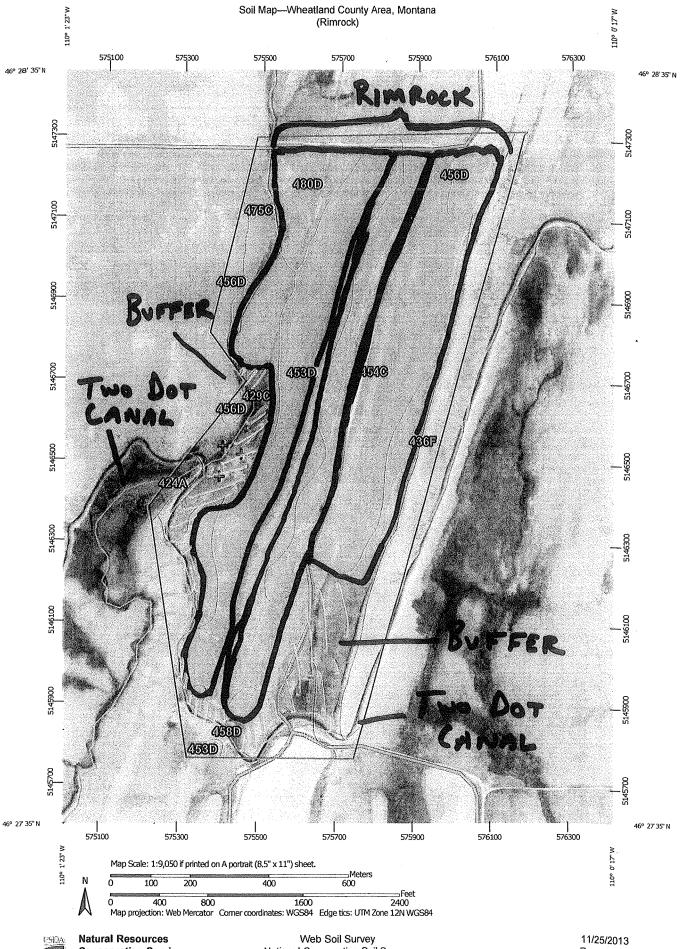
Wheatland County Area, Montana (MT624)						
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI			
416B	Fairway-Korchea loams, 0 to 4 percent slopes, rarely flooded	13.4	5.2%			
422A	Havre loam, 0 to 2 percent slopes, rarely flooded	0.9	0.4%			
434D	Cabbart loam, 2 to 15 percent slopes, fan		2.9%			
436F	Cabbart-Rentsac complex, 15 to 60 percent slopes	13.8	5.3%			
440D	Rentsac-Tanna complex, 8 to 15 percent slopes	110.5	42.7%			
443C	Ethridge-Rentsac complex, 2 to 8 percent slopes	11.5	4.4%			
451C	Chinook gravelly fine sandy loam, 2 to 8 percent slopes	57.7	22.3%			
461C	Varney gravelly loam, 4 to 8 percent slopes	11.8	4.6%			
461D	Varney gravelly loam, 8 to 15 percent slopes	, 16.6	6.4%			
613E	Cabba-Haverlon complex, 0 to 25 percent slopes	15.3	5.9%			
Totals for Area of Interest	The second secon	258.9	100.0%			



Wheatland County Area, Montana (MT624)						
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI			
453D	Cabbart-Rentsac complex, 2 to 15 percent slopes	1.1	0.1%			
454C	Delpoint-Yamacall complex, 2 to 8 percent slopes	192.1	23.9%			
455D	Cabbart-Crago-Delpoint complex, 4 to 15 percent slopes, fan	27.5	3.4%			
456D	Cabbart-Delpoint loams, 4 to 15 percent slopes	89.8	11.2%			
458D	Delpoint-Cabbart-Yamacall complex, 4 to 15 percent slopes	124.8	15.6%			
467B	Sieben-Truchot complex, 0 to 4 percent slopes	30.6	3.8%			
471C	Kobase silty clay loam, 0 to 4 percent slopes	22.0	2.7%			
475C	Zatoville-Kobar complex, 2 to 8 percent slopes	32.7	4.1%			
480D	Yawdim-Abor complex, 4 to 15 percent slopes	16.4	2.0%			
481D	Megonot-Yawdim complex, 4 to 15 percent slopes, fan	73.0	9.1%			
482D	Abor-Crago complex, 2 to 15 percent slopes	0.7	0.1%			
484A	Rothiemay loam, 0 to 2 percent slopes	100.6	12.5%			
484C	Rothiemay loam, 2 to 8 percent slopes	1.4	0.2%			
485E	Yawdim-Crago complex, 4 to 35 percent slopes	9.1	1.1%			
487B	Niart-Crago complex, 0 to 4 percent slopes, fan	10.4	1.3%			
493B	Crago-Musselshell complex, 0 to 4 percent slopes, fan	6.6	0.8%			
497B	Musselshell-Crago complex, 2 to 4 percent slopes	47.7	5.9%			
622B	Ledger, rarely flooded-Absher complex, 0 to 4 percent slopes	16.2	2.0%			
Totals for Area of Interest		802.7	100.0%			



Wheatland County Area, Montana (MT624)					
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI		
424A	Havre-Harlake complex, 0 to 4 percent slopes	3.3	1 3%.		
429C	Gerdnum-Vanda-Creedi complex, 0 to 8 percent slopes, fan	40	- F 6%		
448C	Varney Niart complex , 2 to 8 percent slopes	8.8	3.6%		
454C	Delpoint-Yamacall complex 2 to 8 percent slopes	1.8	0.7%		
456D	Cabbart-Delpoint loams, 4 to 15 percent slopes	105 4	42.7° 6.		
4580	Delpoint-Cabbart Yamacall complex, 4 to 15 percent slopes	30.5	12.4%		
475C	Zatoville-Kober complex. 2 to 8 percent slapes	36 7	14.8° ₀		
480D	Yawdim-Abor complex, 4 to 15 percent slopes	0.1	(I) Ta		
484C	Rothiemay loam: 2 to 8 percent stopes	51.4	20 8° c		
Totals for Area of Interest		247.1	100.0%		



Wheatland County Area, Montana (MT624)						
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI			
424A	Havre-Harlake complex, 0 to 4 percent slopes	2.1	0.9%			
429C	Gerdrum-Vanda-Creed complex, 0 to 8 percent slopes, fan	20.3	8.6%			
436F	Cabbart-Rentsac complex, 15 to 60 percent slopes	20.6	8.8%			
453D	Cabbart-Rentsac complex, 2 to 15 percent slopes	78.5	33.4%			
454C	Delpoint-Yamacall complex, 2 to 8 percent slopes	56.9	24.2%			
456D	Cabbart-Delpoint loams, 4 to 15 percent slopes	14.0	6.0%			
458D	Delpoint-Cabbart-Yamacall complex, 4 to 15 percent slopes	24.7	10.5%			
475C	Zatoville-Kobar complex, 2 to 8 percent slopes	6.1	2.6%			
480D	Yawdim-Abor complex, 4 to 15 percent slopes	11.6	5.0%			
Totals for Area of Interest		234.9	100.0%			